UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,370	07/18/2003	Yong Suk Jin	HI-0153	4054

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EXAMINER
SOL, ANTHONY M

ART UNIT	PAPER NUMBER
2619	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/621,370	JIN, YONG SUK
	Examiner	Art Unit	
	Anthony Sol	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>29 August 2007</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13 and 17-23* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13 and 17-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

- Applicant's Amendment filed 8/29/2007 is acknowledged.

- Claims 1-3, 12, 13, and 17-20 have been amended.

- Claims 14-16 have been canceled.

- Claims 21-23 have been added.

- Claims 1-13 and 17-23 are now pending.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set
forth in section 102 of this title, if the differences between the subject matter sought to be patented and
the prior art are such that the subject matter as a whole would have been obvious at the time the
invention was made to a person having ordinary skill in the art to which said subject matter pertains.
Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-3, 12 and 21-23 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Pub. No. US 2003/0145108 A1 ("Joseph") in view of U.S. Patent No.

5,572,533 ("Sunada").

Regarding claim 1,

Joseph shows in fig. 6b receiving a packet (see block 652).

Joseph further shows in fig. 6b determining if a destination MAC address of the

packet is in a MAC table (see block 658; also see fig. 5c for MAC table, which has

MAC address field 586).

Joseph further shows determining that the destination MAC address of the

packet is not registered in the MAC table (see block 658 with a "No" decision; also see

para. 65).

Joseph does not explicitly disclose determining if the destination MAC address of

the packet is in a management table if the destination MAC address of the packet is

not registered in the MAC table, and discarding the packet if the destination MAC

address of the packet is registered in the management table, the method further

comprising managing registration of information in the management and MAC tables,

including detecting failure of a host of the MAC address, updating the MAC table to

nullify registration of the MAC address based on detection of said failure, and updating

the management table to activate registration of the MAC address preventing

redundant registration of the MAC address in the MAC and management tables.

Sunada shows in fig. 10, a discard address table 421, and further shows in fig.

11, determining if the address is in a discard address table, and still further shows the

"YES" decision and subsequent "DISCARD" action (see block S2; also see col. 6, line

41 to col. 7, line 23, specifically col. 7, lines 17-20). Sunada discloses an apparatus for

monitoring and fault-analyzing a network (see title of Sunada's patent). Sunada

further discloses that "router 3 carries out the usual routing process to pass or block

packets transferred from the LAN interfaces 2a and 2b according to the addresses

such as MAC addresses and IP address of the packets" (see col. 4, lines 43-48).

Sunada shows in fig. 10 that the discard address table 421 resides in the router along

with a filter address table 422. This suggests that the packets with pre-determined

addresses are analyzed by the monitor-fault analyzer 23 and placed in the discard

address table 421 (claimed management table) when a fault is determined.   Sunada

show a flow chart in fig.11 that discloses steps S2 and S3 for determining if an MAC

address is in a discard address table (claimed management table) or a filter address

table (claimed MAC table).

It would have been *prima facie* obvious to one of ordinary skill in the art at the

time of the invention was made to modify the packet network of Joseph to include a

MAC address discard table as taught by Sunada. One skilled in the art would have

been motivated to make the combination so that the resources are devoted to packets

that match collection address table in the menu 310 of fig. 9 (Sunada, col. 7, lines 26-

29).

Regarding claim 2,

Joseph shows in fig. 6b, sending packet to ingress sub-interface to be sent to

egress appliance 302 of fig. 5a, which can be a personal computer that can inherently

serve as a host/server (para. 21).

Regarding claim 3,

Joseph and Sunada combination of the parent claim 1 already teaches checking

both the MAC address table (filter address table of Sunada) and the management table

(discard address table of Sunada) of an incoming packet (see in particular Sunada, fig.

11, steps S2 and S3). Joseph teaches if the MAC address is not in the MAC address

table, broadcasting the packet (para. 65). Thus, it would have been obvious to a person of ordinary skill in the art to try checking both the address tables as disclosed by Sunada before broadcasting the packet as disclosed by Joseph, as a person with ordinary skill has good reason to pursue the known options within his or her technical grasp. In turn, because broadcasting the packet as claimed has the predicted results predicted by the prior art, namely transmitting the packet to the all the stations, it would have been obvious to broadcast the packet after checking both MAC address table (filter address table) and management table (filter address table).

Regarding claims 12, and 21-23,

Joseph shows in fig. 6b inputting a packet in the network switch for transmission to a host 302 of fig. 5a (see block 652).

Joseph does not disclose managing registration of information in a MAC table and a management table of the switch, said managing including preventing the MAC table and management table from storing redundant registration information for each of a plurality of MAC addresses, checking a registration status of the MAC address of the input packet in the MAC table and the management table, and discarding the packet if the MAC address has a first registration status in the MAC table and a second registration status different from the first registration status in the management table because of inaccessibility of the host.

Sunada discloses a monitor fault analyzer for detecting inaccessibility (see abstract, lines 1-4) and shows in fig. 10, a discard address table 421 (claimed

management table) and filter address table 422 (claimed MAC table). Sunada shows
in fig. 11 checking the registration status in the discard address table and the filter
address table and discarding the packet if the MAC address is in the discard address
table (see fig. 11, steps S2 and S3 and col. 7, lines 13-23).

It would have been *prima facie* obvious to one of ordinary skill in the art at the
time of the invention was made to modify the packet network of Joseph to include a
MAC address discard table as taught by Sunada. One skilled in the art would have
been motivated to make the combination so that the resources are devoted to packets
that match collection address table in the menu 310 of fig. 9 (Sunada, col. 7, lines 26-
29).

3.   Claims 4-11, 13 and 17-20 are rejected under 35 U.S.C. 103(a) as being
unpatentable over U.S. Patent No. 6,317,434 ("Deng") in view of U.S. Patent No.
5,572,533 ("Sunada").

Regarding claims 4-6, 9, 10 and 18,

Deng disclose receiving a registration request for registering a host in a MAC
table and registering a MAC address of the host into the MAC table (see col. 4, lines
32-39).

Deng does not disclose determining if the host becomes inaccessible and
transferring the MAC address of the host registered in the MAC table to a management
table if the host becomes inaccessible.

Sunada discloses a monitor fault analyzer (see abstract, lines 1-4) and shows in fig. 10, a discard address table 421 (claimed management table), and further discloses determining if the address is in the discard address table (see col. 7, lines 17-20).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention was made to modify the packet network of Joseph to include a MAC address discard table as taught by Sunada. One skilled in the art would have been motivated to make the combination so that the resources are devoted to packets that match collection address table in the menu 310 of fig. 9 (Sunada, col. 7, lines 26-29). .

Regarding claims 7, 8, 11 and 17,

Deng discloses that MAC address learner 220 reads the Ethernet address of the originating host and stores the address in the MAC address table 230, if the address is not already stored there (col. 4, lines 32-39).

Regarding claim 13, 19 and 20,

Deng discloses receiving a registration request from a remote device and determining if the remote device is registered in a first table and adding an address for the remote device to the first table if the remote device is not in the first table (see col. 4, lines 32-39).

Deng does not disclose monitoring a status of the remote device, receiving a packet for transmission to the remote device, and preventing transmission of the

packet to the remote device if the status of the remote devices indicates the remote

device is inaccessible by changing a registration status of the remote device to a first

status in the first table if the monitored status of the remote device indicates that the

remote device is inaccessible, and changing a registration status of the remote device

to a second status different from the first status in a second table if the status indicates

the remote device is inaccessible, wherein the first table controls transmission of the

packet to the remote device and the second table controls blocking transmission of the

packet to the remote device.

Sunada discloses a monitor fault analyzer for detecting inaccessibility (see

abstract, lines 1-4) and shows in fig. 10, a discard address table 421 (claimed

management table) and filter address table 422 (claimed MAC table). Sunada shows

in fig. 11 checking the registration status in the discard address table and the filter

address table and discarding the packet if the MAC address is in the discard address

table (see fig. 11, steps S2 and S3 and col. 7, lines 13-23). Sunada shows that the

filter address table controls transmission of the packet to the remote device in step S3

and the discard address table controls blocking transmission of the packet to the

remote device.

It would have been *prima facie* obvious to one of ordinary skill in the art at the

time of the invention was made to modify the packet network of Joseph to include a

MAC address discard table as taught by Sunada. One skilled in the art would have

been motivated to make the combination so that the resources are devoted to packets

that match collection address table in the menu 310 of fig. 9 (Sunada, col. 7, lines 26-29).

Response to Arguments

4.   Applicant's arguments filed 8/29/2007 have been fully considered but they are not persuasive.

-    Applicant argues on pg. 12 of the Remarks that Sunada fails to teach or suggest "determining if the host becomes inaccessible; and transferring the MAC address of the host registered in the MAC table to a management table if the host becomes inaccessible," as required by claim 4 and similarly for claims 1, 12, and 13.

-    The Examiner respectfully disagrees. As acknowledged by the Applicant, Sunada discloses discarding a packet if an address of the packet is in a discard table. The objective of Sunada's invention is to utilize an apparatus for monitoring and fault-analyzing a network (see title of Sunada's patent). Sunada discloses that "router 3 carries out the usual routing process to pass or block packets transferred from the LAN interfaces 2a and 2b according to the addresses such as MAC addresses and IP address of the packets" (see col. 4, lines 43-48). Sunada shows in fig. 10 that the discard address table 421 resides in the router along with a filter address table 422. This suggests that the packets with pre-determined addresses are analyzed by the monitor-fault analyzer 23 and placed in the discard address table 421 (claimed

management table) when a fault is determined. Even if, *in arguendo*, Sunada does not suggest that a fault as determined by the fault analyzer 23 determines placement of the MAC address in the discard address table 421, the limitation of claim 4 only requires that the "host become inaccessible." The mere fact that the MAC address is in the discard address table 421, suggests that a determination has been made that the host with a particular MAC address is inaccessible, whether it be caused by a fault or by other reasons, e.g., craft personnel data input. Therefore, Sunada suggests "determining if the host becomes inaccessible; and transferring the MAC address of the host registered in the MAC table to a management table if the host becomes inaccessible," as required by claim 4.

- Applicant's argument with respect to claim 3 has been considered but is moot in view of the new ground(s) of rejection.

- Applicant's arguments with respect to claims 6-8, 10, 11, and 17 fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Conclusion

5.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

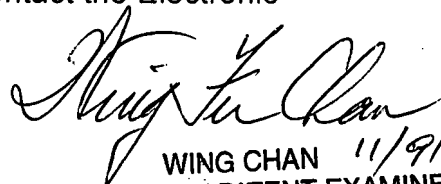policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Anthony Sol whose telephone number is (571) 272-

5949. The examiner can normally be reached on M-F 7:30am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Wing Chan can be reached on (571) 272-7493. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

WING CHAN 11/9/07
SUPERVISORY PATENT EXAMINER

AMS

11/9/2007